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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,902	12/04/2003	Robert L. Paterson	2003-0034.02	9600
21972	7590	09/07/2005		
LEXMARK INTERNATIONAL, INC. INTELLECTUAL PROPERTY LAW DEPARTMENT 740 WEST NEW CIRCLE ROAD BLDG. 082-1 LEXINGTON, KY 40550-0999			EXAMINER PHAM, HAI CHI	
			ART UNIT 2861	PAPER NUMBER

DATE MAILED: 09/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/727,902

Applicant(s)

PATERSON ET AL.

Examiner

Hai C. Pham

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/04/03</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-7, 13-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Maeda (U.S. 6,847,390).

With regard to claims 1 and 19, Maeda discloses a method and apparatus for image forming capable of effectively adjusting an image recording start position, the method comprising determining a power level of a laser (the laser diode 10 scanning the photosensitive member 29 with a predetermined power level P) (e.g., col. 10, lines 17-19), providing at least one photosensitive development device (photosensitive member 29), illuminating a light sensor (optical sensor 7) with light from said laser (10)

generating a signal (sync detect signal /DETP) from said light sensor dependent on said illuminating step (the sync detect signal /DETP having a variation in timing dependent on the power level of the incident laser beam), altering said signal dependent upon said power level (altering the timing of the sync detect signal /DETP using the delay unit 15a to delay or advance the sync detect signal to produce the time-adjusted sync detect signal /DDETP), and starting a scan line from said laser onto at least one said development device dependent upon said altered signal (the write start position being corrected based on the main scanning sync signal represented by the time-adjusted sync detect signal /DDETP) (col. 7, line 61 to col. 8, line 13).

With regard to claim 13, Maeda teaches at least one rotating multifaceted mirror (polygon mirror 22, Fig. 2), at least one laser (LD 10) directed toward a corresponding one of said at least one rotating multifaceted mirror, said light beam conveying information, said rotating multifaceted mirror reflecting at least a portion of said light beam along a scan line, said at least one laser having an assigned power level (predetermined light amount P), and at least one light sensor (sync detect sensor 7) positioned to detect at least a portion of said light beam that is reflected by said at least one rotating multifaceted mirror along said scan line, thereby defining detected light, said at least one light sensor producing a signal (sync detect signal /DETP) dependent upon said detected light, said signal altered by said assigned power level (time-adjusted sync detect signal /DDETP depending on the predetermined light amount P), said signal that is altered is used to initiate said at least one laser to start conveying said information (time-adjusted sync detect signal /DDETP being used as the main scanning

sync signal for initiating the write start signal).

Maeda further teaches:

- said altering step includes altering a delay time associated with said signal (altering the timing of the sync detect signal /DETP using the delay unit 15a to delay or advance the sync detect signal to produce the time-adjusted sync detect signal /DDETP) (col. 8, lines 52-59),
- said delay time is increased if said power level is increased (when the light amount increases the timing of the sync detect signal /DETP is moved up, e.g., advance T_c as shown in Fig. 1, and the delay time for the write start position is increased at least by that much delay T_c) (col. 9, lines 25-36),
- said delay time is decreased if said power level is decreased (when the light amount decreases the timing of the sync detect signal /DETP is delayed, e.g., delay T_b as shown in Fig. 1, and the delay time for the write start position is decreased at least by that much delay T_b) (col. 9, lines 36-40),
- said determining step includes retrieving said power level from a memory location (the predetermined light amount P being determined beforehand and stored in the memory 19a),
- utilizing said illuminating step, said generating step, said altering step and said starting step with an other laser (the write-start-position correction procedure performed for one color being performed again for each of the remaining colors) (col. 11, lines 21-27),

- coordinating said starting step associated with said laser with said starting step associated with said other laser (in one embodiment, two light beams of different colors, which share one sync detect sensor, are arranged to fall on the single sensor with a slight delay one relative to the other and the time-adjusted sync detect signals are adjusted accordingly such that the write start positions of the two colors coincide to correct for mis-registration of the color planes).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda in view of Ikeda (Pub. No. U.S. 2004/0119003).

Maeda discloses all the basic limitations of the claimed invention except for adjusting at least one of the first and second power levels to alter a characteristic of the printable image or image quality.

Ikeda discloses a method for controlling the light amount of the each of the plural lasers (21) by adjusting the output power of the lasers to the predetermined value and using the scanning synchronization signal generated by the synch photo detector (25) to monitor the output power of the lasers during the adjustment to ensure a reliable power adjustment and to increase the quality of the reproduced image.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to incorporate the adjustment of the power output of the laser light sources into the device of Maeda as taught by Ikeda. The motivation for doing so would have been to ensure a reliable power adjustment and to increase the image quality as suggested by Ikeda.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai C. Pham whose telephone number is (571) 272-2260. The examiner can normally be reached on M-F 8:30AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on (571) 272-1934. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hai C. Pham

HAI PHAM
PRIMARY EXAMINER

September 6, 2005